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Mesopotamia

Author(s): Joan Oates

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Trade and power in the fifth and fourth millennia BC: new evidence from northern Mesopotamia

Joan Oates

Introduction

The formation of the earliest known cities (generally attributed to Late Uruk Mesopotamia, c. 3500 cal. BC) was accompanied by the foundation of 'colonies' and smaller 'outposts' in Syria, Anatolia and Iran, established apparently to secure various raw materials lacking in the Mesopotamian homeland. The growth in Sumer of organization(s) capable of constructing and administering such distant 'colonies' both reflected and contributed to increasing levels of social and economic complexity. The scale of the colony settlements, both in terms of size and distance, raises again the question of the role of long-distance trade in early state formation. The colony data are new, and derive largely from twenty years intensive 'rescue' archaeology along the Euphrates, both in the area of the Tabga and now the Tishrin dams in Syria and of a series of dams in south-east Anatolia (Fig. 1). Since the discovery and excavation of Late Uruk Habuba-Süd/Qannas (Strommenger 1980) and Jebel Aruda (van Driel 1979) on the Upper Euphrates in north-western Syria, some 1,200km from the Mesopotamian heartland and the eponymous site, the role of these and other Uruk-related sites has received much attention (inter alia, Palmieri 1985; Sürenhagen 1986; Schwartz 1988; Algaze 1989). These new investigations have greatly expanded our knowledge of fourth-millennium BC contacts not only between Syro-Anatolia and southern Mesopotamia (and probably Elam) but also across northern Mesopotamia, represented archaeologically by the widespread distribution of identical, indigenous northern materials from beyond the Taurus in the west to the foothills of the Zagros in northern Iraq.

Two views have been widely accepted. 1) That the south Mesopotamian (Late Uruk) presence in Syria and Anatolia was of relatively short duration, and 2) that the motive for this cultural intrusion was the acquisition of raw materials such as metals, good timber, stone and other exotic items lacking in the environment of southern Mesopotamia. Existing data seemed to support the view that the Uruk network in the north-west collapsed at the end of the Late Uruk period (Eanna archaic IV, perhaps c. 3300 cal. BC, Behm-Blancke 1985: 94). At approximately the same time the monumental Eanna precinct at Uruk itself was demolished in preparation for a comprehensive rebuilding (Eanna archaic III) (Finkbeiner 1986), an event which has been interpreted as evidence of

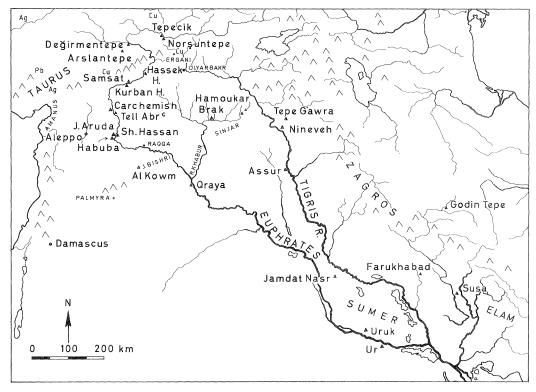


Figure 1 Map showing major sites mentioned in text. For discussion of routes, cf. Grant 1937; D. Oates 1968; 1977: 236; Palmieri 1985: 207; Algaze 1989: 579.

a major social or political upheaval, possibly to be identified with some conceptual shift and apparently coinciding with the loss of the northern 'colonies'. The presence of polychrome Jamdat Nasr pottery (= Uruk archaic III, though note the reservation expressed in Finkbeiner 1986: 33–4) in Oman (D. T. Potts 1986) and the widespread evidence of an eastern network based on Susa (Amiet 1986; T. F. Potts, this volume) seemed to emphasize both the loss of Anatolian raw material resources and some reorganizational need in Sumer itself at this time. Much emphasis has also been placed on apparent changes in settlement patterns (Adams 1981; Postgate 1986); at the same time the question whether the 'Jamdat Nasr horizon' had any separate, distinct, archaeologically identifiable reality was the subject of debate (Finkbeiner and Röllig 1986).

The site of Uruk/Warka provides the basic fourth-millennium BC Mesopotamian sequence. Indeed, with the exception of Nippur at which early Uruk materials have not so far been recovered, it remains the only Sumerian site at which extensive fourth-millennium levels have been examined. Yet up to now Uruk has yielded virtually no prime contexts. This fact has been much discussed with reference to the origins of writing (Nissen 1986); it affects equally the attribution of other types of artefact and has been responsible, *inter alia*, for disagreements as to the relative date of the 'Late Uruk' contact with Syro-Anatolia (e.g. Sürenhagen 1986: 32).

The decision to devote this issue of World Archaeology to 'Ancient Trade: new

perspectives' was taken over two years ago. At that time it was not the editor's intention to contribute. However, discoveries made this past spring at Tell Brak in north-eastern Syria have provided a 'new perspective' of some importance and the *raison d'être* for this brief commentary. These new materials *are* well-stratified and bear on the interpretation of Late Uruk expansion and its demise. They come from Brak Area TW (Oates and Oates 1989: fig. 1), where in 1991 we excavated some nine building phases consisting of small houses with walls of an unusual, square-section, oblong brick type (*riemchen*), characteristic of Late Uruk southern Mesopotamia. These houses yielded a very distinctive ceramic assemblage which immediately pre-dates the third-millennium BC (northern) Ninevite 5 (Oates and Oates 1991: 138–43). In the lower part of this sequence were buildings with grill





Plate 1 Mass-produced pottery types from the Area TW Jamdat Nasr and Late Uruk levels at Tell Brak. Above, bevelled rim bowls; below, Jamdat Nasr 'coarse flower pots', height of tallest 25cm (cf. Nissen 1970; Sürenhagen 1974/5; Matthews 1989; Pollack 1990).

foundations, a type known elsewhere at this time (Tell Karrāna 3, Fales et al. 1987; Hassek Höyük, Behm-Blancke 1985: fig. 1), below which lay the 1992 season's most significant discoveries. First, a level containing a number of ceramic types identical with those from the site of Jamdat Nasr, including two polychrome sherds (cf. Matthews 1992: figs 3, 4), the first discovery of such ceramics in the north. In addition to the familiar range of mass-produced vessels, a large number of unusually tall 'coarse flower pots' were recovered, a type not as yet attested elsewhere (Plate 1). Equally interesting was the large building which lay below the 'Jamdat Nasr' level, from which we recovered a wide range of complete vessels of Habuba/southern Uruk type (Plates 2, 3). This building would seem to be contemporary with, or perhaps just later than, the Tell Brak Area CH level 9–10 structures excavated in 1984, which contained largely indigenous northern Uruk material, also in situ (Oates 1986). This northern Uruk repertoire has a very wide distribution from the Upper Euphrates (e.g. Kurban Höyük, Algaze 1986; Karatut Mevkii, Schwartz 1988) to the northern Jazira in Iraq (Tell al Hawa, Nineveh).

The Jamdat Nasr ceramics, at present unique to Brak, extend the period of southern contact well into Eanna archaic III, and confirm Mallowan's earlier identification of Jamdat Nasr material at the site, in particular the famous Eye Temple (1947: 32, 60ff.; also Lebeau 1990: 253ff.). Other new information of major significance comes from Shaikh Hassan, across the Euphrates from Jebel Aruda, which has also yielded southern Uruk ceramics but of a date earlier than Habuba/Aruda (Boese 1986–7; Sürenhagen, pers. comm.). Together, these new data generate a very different picture of Uruk expansion

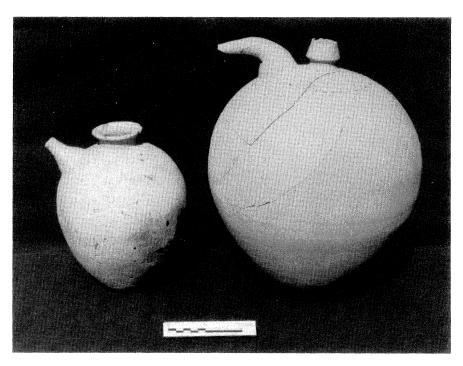
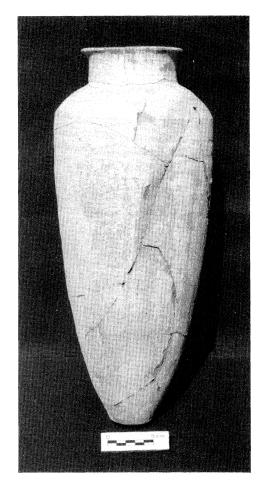
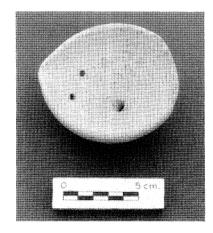


Plate 2 Late Uruk spouted vessels from Tell Brak, Area TW level 12. The drooping spouted jar bears both jab-incised and reserved slip decoration (cf. Sürenhagen 1974/5: pl. 12: 76).





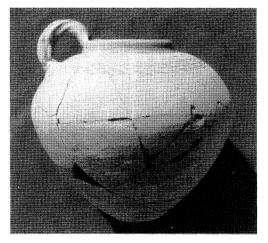


Plate 3 Late Uruk pottery, Tell Brak Area TW. Parallels for the small ladle can be found in Matthews 1992: fig. 2: 15, 16; Behm-Blancke et al. 1981: pl. 26; Sürenhagen 1974/5: pl. 19, 158.

from the 'short-lived foray' model (Algaze 1989: 571). It is the purpose of this paper to re-examine the evidence for long-distance trade in the fourth millennium BC, in the light of this and other new evidence.

Background

It is often asserted that Mesopotamia is wholly lacking in raw materials and that the necessity to organize the long-distance acquisition of such resources was a major factor in the early development there of complex political and economic forms. The development of extensive exchange networks is seen as important in rising social complexity, and especially in the growth of the bureaucratic controls that were developed to record, regulate and redistribute both local production and goods and raw materials from elsewhere. A contrary view is expressed in Wright 1981: 277-8.

Certainly the south Mesopotamian alluvium was lacking in metal, timber and exotic stone resources, but often it goes unrecognized that such items were far from necessities in any subsistence or survival sense. Moreover, some stone is locally available, including nodules of flint in the western desert, gypsum and a local alabaster (Admiralty Handbook 1918, 1944); and it has recently been shown that the limestone used in monumental buildings and elaborately carved vases at Late Uruk Warka came from a quarry only some 50km to the south-west (Boehmer 1984). The most crucial south Mesopotamian resource was of course the life-giving water of its two great rivers. The ubiquitous alluvial silts provided not only rich soils but also the elaborate ceramics found at the earliest settlements in Sumer and the mud-brick with which these settlements were built. Roofing materials suitable for ordinary (but not monumental) household structures derived from riverside trees such as poplar and reeds or reed matting, another certainly indigenous product. Grazing was widely available (Oates and Oates 1976: 120), and the ubiquitous occurrence of spindle whorls in the earliest villages attests an extensive textile production. Wheat and barley must have been introduced from elsewhere, but once irrigation farming was well-established (at least as early as the seventh millennium cal. BC), sizeable farming villages were a viable proposition without recourse to outside resources. Specifically and significantly missing among the local resources, however, are the types of raw material from which items of elite status normally derive, though these themselves are of course socially defined and we know from later sources that special kinds of textiles, for example, may have served such a function. In later periods quality textiles are well attested among Mesopotamia's many 'invisible exports' (Crawford 1973; Larsen 1987).

Thus the raw materials which are lacking in the south Mesopotamian environment are not those essential to everyday survival but those by which positions of power and elite status are acquired, expressed and reinforced. Moreover, already in the Mesopotamian neolithic (seventh millennium BC) such visible expressions of status were not uncommon, in the copper and lead trinkets of sites like Tell es-Sawwan and Yarim Tepe and in the widespread occurrence of semi-precious stone (*inter alia*, turquoise at Sawwan, Plate 4). In the absence of informative evidence we tend to assume that such small-scale objects were acquired via simple group to group exchange, but by the ^cUbaid period there is a visible change in both organization and acquisitional behaviour which is significant in understanding the nature of early inter-regional exchange in Western Asia.

In the 'Ubaid period there is evidence attesting increasing centralization and new forms of symbolic validation of social and economic relations: this can be seen in larger settlement size ('Uqair), the first identifiable monumental buildings (Eridu, Gawra), the first occurrence of large numbers of clay door and container sealings (Gawra, cf. Tobler 1950; Rothman 1988), a major administrative innovation with implications not only for the increasing receipt and despatch of portable goods, but also of the growth of 'authority' and perhaps even some form of central collection and redistribution. Comparable evidence has not yet been discovered in the south, but there we are poorly informed of this important stage in Mesopotamia's prehistory, owing largely to the difficulty of investigating early levels on major, long-occupied sites. There can be little doubt, however, about the increase in both overall settlement size and organization (Oates 1984; Henrickson and Thuesen 1989). Moreover, it is in this period that we see the first foreshadowing of the Uruk expansion, in the spread of southern 'Ubaid material culture over the whole of



Plate 4 Alabaster figurine with turquoise necklace, from neolithic cemetery at Tell es-Sawwan, Iraq. Height c. 10cm, c. 6000 cal. BC.

Mesopotamia, an apparent cultural unity best exemplified at Gawra with its southern temples and ceramics, the latter largely locally made (Davidson and McKerrell 1980).

Most important in the context of this paper is new evidence from sites on the Upper Euphrates which seems to confirm the presence as far north as Malatya, across the Taurus, of at least one settlement which can best be interpreted as an 'Ubaid 'outpost' (early fifth millennium cal. BC). Değirmentepe, now flooded by the Karakaya dam, lies some 27km north of Malatya, en route to Anatolian sources of both copper and silver (Esin 1983; 1985; 1989). By contrast with the local chalcolithic assemblage, both the house type (Esin 1988: fig. 2) and the painted pottery closely parallel contemporary examples from Mesopotamia. Moreover, material from the site includes the earliest and largest collection of stamp seals and clay sealings of this date from Anatolia; these are said to include door sealings, presumably from either private or public storehouses. ^cUbaid pottery is also reported from the site of Arslantepe (Esin 1983: 187), and (rarely) at sites even further north in the Altınova plain. A major cUbaid site has also recently been identified at Tell Abr^c, also on the Euphrates just south of Carchemish (Hammadeh and Koike, n.d.). Such sites confirm the Mesopotamian interest in Syro-Anatolia at this early date, but their precise social and economic relationship with the contemporary indigenous chalcolithic, and the 'Sumerian' south, remains to be ascertained.

Another 'Ubaid expansion, often referred to in terms of 'trade', presents a very different picture. This is signified by the appearance of ^oUbaid ceramics along the Arabian Gulf (Oates 1976; Frifelt 1989). By contrast with Anatolia these 'Ubaid sites are ephemeral with few if any permanent structures. With the exception of a single group of sites in the area of Hofuf in the Eastern Province of Saudi Arabia they occur along the coast. Neutron activation, electron microprobe and thin section analysis of the painted pottery by which these sites are identified show an exclusive relationship with Sumer (Oates et al. 1977). None of the painted pottery clays resembles that of the local coarse ware, nor does pottery per se survive the 'Ubaid presence. These 'Ubaid ceramics cover a considerable period of time, and up to now none has been shown to be local. With the exception of the Hofuf sites, the pottery is not found inland, i.e. it does not appear within any local exchange network. Nor does it appear to have been copied. It would seem that these pots travelled with their owners, either for their contents or for their utilitarian value. There is no evidence that they were 'exchanged', and these Gulf data certainly do not support the view that 'maritime trade and transportation developed in the Persian Gulf as far as Bahrain since at least 'Ubaid times' (Alden 1982: 624). At present they are most reasonably seen as representing seasonal exploitation, over a long period of time, by groups from southern Mesopotamia who presumably sailed down the Gulf (models of sailing boats were found in the Eridu cemetery, Lloyd and Safar 1948; pl. 5) and returned when weather and winds permitted. Whether the desired resources were types of fish and other marine life not found in the rivers of Mesopotamia, perhaps dried and carried back to Sumer (this could account for the different types of flints found associated with such sites, Frifelt 1989: 415), or more exotic items such as pearls, cannot be ascertained. What is clear is that this phenomenon does not parallel the 'Ubaid expansion into Anatolia, and that 'exchange' is an unlikely interpretation. Unfortunately, as in all such studies, interpretation is constrained by the lack of non-perishable goods, likely to have constituted our most important evidence for exchange relations.

Thus in immediately pre-Uruk times two different kinds of evidence suggest the likelihood of deliberate 'outposts', either involved in local exchange networks or perhaps more directly in the production or acquisition of such elite commodities as copper, lead and possibly silver (gold is also reported by Woolley from a contemporary context at Ur (1931: 344); a context confirmed by the late Sir Max Mallowan), and of short-term sea-borne expeditions for the direct acquisition of marine commodities. At the same time in Mesopotamia itself social and economic developments clearly signal the beginnings of what was to culminate a millennium or so later in the Sumerian state.

Following the ^cUbaid period there seems to have been a significant retraction from the widespread ^cUbaid interactions, at least with respect to southern Mesopotamia. Many scholars have seen the later history of Mesopotamia as a recurrent cycle of centralization, expansion and collapse, and the visible contraction of southern material culture in the early Uruk phase may possibly represent the first such retraction. Within historic times periods of expansion are accompanied by increasing centralization and administrative reorganization (Akkadian, Late Assyrian), an observation perhaps pertinent also to the ^cUbaid south. In the north, however, the contemporary late chalcolithic picture is not as circumscribed as the apparent loss of contact with the south might be thought to imply. The widespread distribution of certain quite distinctive ceramic types from the Altınova plain

(Norsuntepe) to Brak to Hamoukar to Gawra indicates a very extensive region of interaction (Hauptmann 1976: pls 49, 50: 1, 2; Tobler 1950: pls LXXIX, LXXXa, CXLV; Oates 1986: pl. 7; 1987: fig. 3: 6, 7; the cultivated fields and small tells just to the south-east of Hamoukar produce identical surface material, including unusually large channel rim vessels, found also at Brak and Gawra (pl. CXLV, 405, 406)). Indeed, at the end of this 'early Uruk' phase the cemetery at Gawra (level X) reveals some of the most persuasive evidence for social hierarchies known from this time. Moreover, clay sealings from sites like Gawra and Norsuntepe, now found largely in what appear to have been private houses, suggest the possibility not only of centrally administered but also more privately organized economic relationships. Later, shared symbolism is seen in the alabaster 'spectacle idols' of Brak (Oates 1985: pl. XXV), Hassek (Behm-Blancke et al. 1981: pl. 12: 5), el Kowm (Cauvin and Stordeur 1985: fig. 8: 1) and Sheikh Hassan (Boese 1989-90:329).

Uruk expansion

Few archaeological discoveries in recent years have made more impact than the sites of Habuba Kabira Süd/Qannas and Jebel Aruda. At both sites not only the material culture pottery, seals, sealings – but also the individual residential units are indistinguishable from those of southern Mesopotamia and in particular at the site of Uruk, previously our major source for the fourth millennium. The identity of material culture, ideology, accounting practices, use of space and building techniques render inconceivable any interpretation other than that the settlements at both Habuba and Jebel Aruda were built and lived in by south Mesopotamians. Both settlements were short-lived (100-150 years at most, perhaps considerably less); both were abruptly abandoned. The presence of monumental temples at Jebel Aruda and the essentially secular structure of Habuba suggest a difference of function for the two sites, which is reinforced by differences in the bureaucratic paraphernalia, including the clay tokens, bullae, other sealings, and the seals themselves (Strommenger 1980; van Driel 1983). No agricultural tools were found, and food was apparently acquired from local farmers (attested by the large storage jars said to constitute the only local pottery present). The construction of a massive wall in the second building phase suggests that local relations may not have been entirely peaceful, though it is possible that the wall served only to protect the valuable commodities, the collection of which is likely to have been the site's basic purpose – or that it may have been entirely symbolic. The presence of an earlier walled settlement at nearby Tell Sheikh Hassan (below) remains equally unexplained; there is little evidence for 'conflict' either here or in Sumer at this time (Fig. 2).

Since the discovery of Habuba Süd and Jebel Aruda, a number of contemporary sites have been identified in both Syria and Anatolia, which display various degrees of relationship with the Uruk south (or with Habuba/Aruda?). Some have been excavated, some identified solely by their surface remains. Such sites have been classified as 'colonies' or 'enclaves', 'outposts', i.e. smaller sites that show a close correlation with Uruk, and Uruk-related sites (Algaze 1989; Sürenhagen 1986), many of the latter solely on the dubious basis of the presence of bevelled rim bowls (Plate 1), the earliest of the

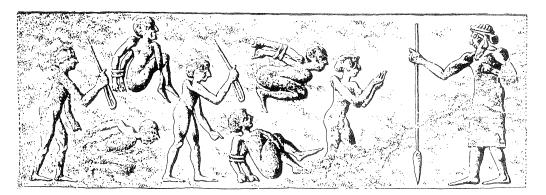


Figure 2 Evidence for conflict is rare in Late Uruk Mesopotamia, and seen largely in a small group of seal impressions from Warka which illustrate the taking (? or torture) of prisoners (cf. Brandes 1979: pls 1–13). In Sumer known city walls are of Early Dynastic date (but see now Pollack et al. 1991: 63). (After Brandes 1979: plate 1.)

'mass-produced types' widely used at this time, the purpose of which continues to elude us. Whether they were ration bowls, associated with a centralized administration, or (most recently) containers for baking bread (Millard 1988; Chazan and Lehner 1990), remains an unresolved question, but their presence *alone* does not signify more than contact with what had by then become a widespread system or technique. Nor do they necessarily signify a Late Uruk date (Oates and Oates 1991). At Tell Sheikh Hassan such vessels were found set into fireplaces (Boese 1986–7: 74). Of the 'outpost' sites undoubtedly the most informative is Hassek Höyük, an isolated small settlement some 260km beyond Habuba, at an important Euphrates ford which provided access to the Taurus some 20km beyond (Behm-Blancke et al. 1981, 1984). The major building and its contents are of southern Uruk types; even the use of cone mosaic wall decoration is attested (Behm-Blancke 1989).

This Uruk expansion has been seen in terms of a variety of models, most recently and comprehensively in terms of 'centre and periphery' (Algaze 1989). The acquisition of raw materials remains the common sense motive, but it must be emphasized that no single shred of evidence attests any form of 'trade'. The evidence for bureaucratic organization is overwhelming; what is less clear is what was being organized. Moreover, evidence for industrial activity associated with the essentially 'Uruk' sites (e.g. Canaanean blade production at both Hassek and Brak, Plate 5) illustrates the production of tools for which there is no evidence whatsoever in the south. Evidence for metalworking is found at sites beyond the Taurus, at Değirmentepe as early as the 'Ubaid levels (Esin 1989: 137) and at Tepecik and Norsuntepe, close to the Ergani mines (Hauptmann 1982: 60-1), and includes silver and possibly iron (?ore) (Brandt apud van Loon 1978: 61-2). But there is neither overwhelming evidence for the acquisition of metals at Uruk-related sites in the north nor for the consumption of large quantities of metal status objects in the south. This statement must, of course, be qualified by two facts, that metals can be melted down and reused, and that we have failed to find the major cemeteries of fourth millennium BC Sumer, where one would expect to find large repositories of such elite items. Certainly there was a developed, technically advanced, local metallurgy in Anatolia, its products including

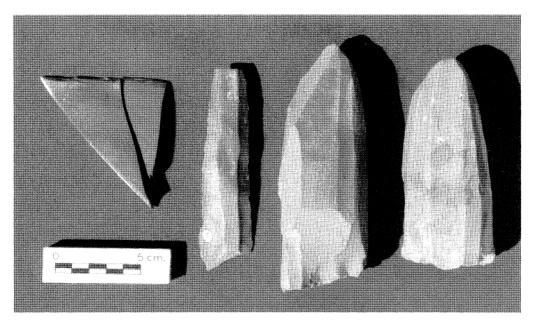


Plate 5 Late Uruk tabular flint, Canaanean blade and flint cores from Tell Brak, Area TW level 12. An obsidian core weighing over 2kg was found with these objects (cf. Behm-Blancke et al. 1981: pl. 14; 1984: pl. 5: 3; Strommenger 1980: fig. 45).

silver-inlaid daggers, and an increase in the quantity of copper/bronze found on sites in Sumer (Moorey 1985; Adams 1981: 80; Palmieri 1981; 1985). What we lack is actual evidence that one purpose of sites like Habuba was to acquire such objects or raw materials for southern consumption. Yet the notion persists, and indeed on the geography of settlement distribution seems overwhelmingly persuasive, that the pursuit of metals must have played a major role in the Uruk presence in these distant areas. Habuba may also have served as a transshipment centre for timber from the Amanus, an historically attested source. Nor should we forget that the wealth of the Syrian steppe even today lies in its flocks and herds, and that wool was the basis of later Ebla's prosperity, 'an empire built on the backs of simple shepherds' (Gelb 1986: 158).

The impressive 'administrative' evidence from sites like Habuba and Jebel Aruda, and indeed from indigenous sites like Arslantepe (Frangipane and Palmieri 1988), a type of activity attested in the north as early as the 'Ubaid period, suggests a high level of organization but not necessarily regional centralization even in Sumer. Though in the Arslantepe levels attributed by the excavators to the Late Uruk phase the thousands of sealings seem to have derived from public buildings. Uruk is often seen as a, if not the, major central place, but this is an assumption based on the fact that most of the evidence comes from Uruk and is much influenced by that city's extraordinary monumental precincts and the fact that it remains the sole source of early writing. We are for the most part uninformed of the nature of contemporary Sumerian sites.

To this Syro-Anatolian reconstruction, currently seen in terms of a short-lived phenomenon the collapse of which accelerated a structural shift in Sumer, can be added the new evidence from Tell Brak, summarized above (p. 406), and from the site of Tell

Sheikh Hassan. At the latter site seventeen levels of southern materials have been excavated, now dated earlier (?Middle Uruk) than Habuba and the Late Uruk phase at Brak. Crucial to this earlier dating are certain very characteristic and distinctive ceramic types which do not occur at Habuba, *inter alia* long-handled ladles (Boese 1986–7: fig. 34) and conical cups with pouring lips (Sürenhagen 1986: 31–2; 1978). Similar pottery is reported from sites such as Qraya, well south of Habuba near the Euphrates-Khabur junction, and at Kowm 2-Caracol, situated on the steppe/caravan route at the western end of Jebel Bishri, south of Raqqa (Sürenhagen 1986; Cauvin and Stordeur 1985: fig. 6: 2). Also important at Sheikh Hassan is evidence for the use of bullae and tokens, and cylinder seals, which must significantly pre-date their present earliest attributions in the south (level 10, Boese 1986–7: 77, figs 36–9). Sadly, the earliest levels of this important site are now lost beneath the waters of Lake Assad (Boese 1987–8: 159).

Comment

Whatever interpretations are placed on these widespread cultural interactions, present evidence indicates that the pattern began at least as early as the "Ubaid period. Curtin's 'trade diaspora' (1984), the establishment of communities specifically for the purpose of mediating exchange relations between areas of different resource potential, offers one possible model (see Algaze 1989). According to Curtin 'trading settlements' tend to be directly involved in the exploitation of local resources, and therefore widely dispersed, when the local networks are relatively underdeveloped, a pattern with which Değirmentepe seems to conform (across the Taurus and near the actual ore sources). Present data are inadequate for any assessment of the degree to which such settlements were in direct relationship with the south, though one must suspect that major northern "Ubaid sites like Brak and Samsat or Carchemish may have played important mediating roles. Indeed it is in this context that the persistence after the apparent "Ubaid 'collapse' of a northern interaction zone should be seen (Norsuntepe – Brak – Hamoukar – Gawra).

For ^cUbaid Mesopotamia itself present evidence suggests different kinds of exchange phenomena and the necessity of a variety of models, geographically differentiated. In the Gulf, for example, trading 'outposts' of Değirmentepe type are lacking; a different mode of direct resource exploitation seems to have been involved, based on intermittent and impermanent Sumer-based intrusions, perhaps more a factor of environmental than organizational conditions. The widespread identity of ^eUbaid cultural material throughout northern Mesopotamia, and as far west as the Euphrates (Tell Abr^c) remains to be satisfactorily explained. Flannery's emulation model, as applied to Olmec-Oaxacan relations, provides many insights, in particular that Olmec influence was probably strongest in those areas that were already most developed and that already had status systems into which Olmec concepts could profitably be fitted. Emulation of Mesopotamian administration and religion makes sense only if local elites derived increased status, and thereby power, from their role as mediators in this contact. Indeed the adoption of southern public institutions (the temples at Gawra) has been seen as a northern assimilation of a southern means of consolidating restricted access to the means of production (Forest 1983). Purely demographic models have also been proposed, but the

simple fact is that our data are inadequate for more than speculative assessments. It seems clear, however, that the northern 'Ubaid 'acculturation' is of a different degree from that of any other period in Mesopotamian history. (Without written documentation, evidence of the Akkadian Empire at Brak, one of its provincial administrative centres, would be attested solely in the iconography of a few clay sealings!)

To return to Curtin's model, it would seem that trading settlements are more likely to be established at focal transport nodes in situations where local polities already control developed networks (the latter perhaps to be seen in the post-cubaid, indigenous, northern, interregional contacts). Late Uruk locations, e.g. Habuba/Qannas, dominating - as did Meskene in later times - the traditional Euphrates terminus for access to the Mediterranean [and note the increasing evidence for contact with Egypt, perhaps via this route, Sürenhagen 1986; fig. 24; Moorey 1987; 1990; von der Way 1987], and Hassek Höyük, sited where the Euphrates route crosses the Taurus, may perhaps be interpreted in this context. Brak and Hamoukar control alternate routes northwards from the Tigris Valley and the Mesopotamian Jazirah, but these are not colony sites. Both were indigenous sites of urban proportion, and controlled prime agricultural land. At 90ha Hamoukar bevelled rim bowls have been found, but no other southern Uruk pottery has yet been reported. The local, largely chaff-tempered, late chalcolithic ceramics known from Brak and Hamoukar are also widely recorded, from Nineveh and Hawa in the east to the Karababa basin in the west (Kurban Höyük, Karatut Mevkii), clear evidence of widespread northern social and economic interactions at this time.

A new feature is the certain identification of southern Jamdat Nasr materials at Brak. This evidence not only prolongs the period of Late Uruk contact, but its absence elsewhere implies some structural reorganization. The reasons for this are undoubtedly complex, but a number of authorities remark on the appearance at this time north of the Taurus of a 'red-black burnished ware' of certain East Anatolian/Transcaucasian origin (Hauptmann 1982; Palmieri 1985). Both the frontiers and the local structure of the fourth millennium exchange systems now change, and it is possible that Brak, with at present the sole evidence for genuine southern contact, served as a (?the) major north-south organizational centre. To the north-west, the so-called 'colonies' had been abandoned (as was Late Uruk TW level 12 at Brak); indeed Hassek Höyük, closer to the Taurus, was destroyed. Moreover, at the Anatolian sites there is no longer evidence for central redistributive institutions (Palmieri 1985: 208). Remnants of Late Uruk cultural tradition persist in what is referred to as the 'late reserved slip ware' horizon, with a distribution at the very western margins of the former interaction zone (Tepecik, Arslantepe, Hassek). At Tepecik an 'isolated outpost' calls to mind the lone administrative building at Godin Tepe in the Iranian Zagros (Esin 1982a; 1982b; Weiss and Young 1975). Often described as 'late-Uruk-related', owing in part to the presence of bevelled rim bowls now known at Brak significantly to post-date the Jamdat Nasr horizon, it is likely that these 'late reserved slip ware' sites are contemporary with a post-Uruk, early bronze horizon which can be shown at Brak to pre-date the earliest Ninevite 5 (Oates and Oates 1991). Of interest is the apparent evidence for decentralization at the Anatolian periphery, despite the wealth and centralized administration of the Late Uruk contact phase, perhaps an indication of the degree to which the local emergent elite had become dependent on the earlier exchange relations, now lost or significantly altered.

Conclusions

From the Late 'Ubaid period onwards there is evidence for significant social change in Sumer itself, with the establishment of public institutions and increasingly wealthy elites. With the exception of Uruk and its vast monumental complexes the archaeological evidence for both the nature and the organizational activities of these institutions now comes largely from outside Sumer, in particular in the context of the so-called colony sites. This paper has emphasized both the essentially social role played by the commodities of which the acquisition seems logically to have been at least one major motivating force in the establishment of the 'Ubaid and Uruk 'networks', yet, perversely, the virtual absence of direct archaeological data for any form of trade or exchange. Such evidential problems are even more clearly illustrated in the historically attested Cappadocian trade, organized from the city of Assur (Larsen 1987). The latter family-based enterprises, however, are unlikely to provide a suitable model for the extraordinary organizational capacities and capabilities implied by the mere existence of fourth-millennium BC sites like Habuba and Jebel Aruda, and no doubt many more about which we are less well-informed (Carchemish, perhaps, and Samsat, now flooded). The paper has also emphasized the ^eUbaid roots of this long distance pattern, and the persuasive evidence for a highly developed and distinctly northern region of interaction from ^cUbaid times onward. Indeed, in the 'Ubaid and Uruk periods the north is characterized by an elaboration of administrative paraphernalia as yet unparalleled in the south before the Late Uruk period, and it must remain a possibility that the very specialized use of sealed clay bullae as record of receipt and dispatch may have originated within this northern inter-regional system. [The earliest string-attached, sealed bullae yet discovered come from Halaf Arpachiyah (Mallowan 1935: pl. IX, b; von Wickede 1990: 54-66)].

These observations raise again the question of the role of long-distance trade in the growth of primary states. In the context of Varna Renfrew has emphasized the interrelationship of production and exchange, the circulation of goods of 'prime', i.e. 'ascribed intrinsic' value and the emergence of prominent social ranking, and suggests that the key to complex development may lie in technical advance which ensures new kinds of demands, not merely the (unprofitable) circulation of existing goods (1986: 159; see also Brumfiel and Earle 1987). In the specific context of 'Ubaid Mesopotamia's undoubtedly 'prosperous and increasingly stratified agricultural society' (Yoffee 1981: 23), the lack of elite commodities such as metals and rare stone is likely to have stimulated both the demand for exotic items and the organization essential to their procurement. The geographical location of 'trading' outposts at this time and the associated evidence for metal-working at sites north of the Taurus makes plausible such an assumption despite the minimal artefactual evidence from Sumer. What was exchanged from Mesopotamia, or whether coercion was a factor of any significance, cannot be ascertained from the essentially negative evidence of prehistory. Later historical parallels suggest that south Mesopotamian manufactured goods may have been in high demand, and stress the role of booty (T. F. Potts, this volume). At no time is there evidence for the extensive export of grain (cf. also D. T. Potts, p. 424), which would have created tremendous logistical problems. Indeed surplus production would more logically have been used to support the southern craftsmen and administrators behind the system we have been examining.

Moreover, the evidence for craft specialization dates well back in the neolithic (Oates 1977) and by the time of the earliest written texts, a hierarchical arrangement of terms relating to crafts and professions is evident (Nissen 1974: 12–14).

One further point remains to be emphasized. The perception of Near Eastern distances is difficult in the age of the aeroplane. Yet 'an understanding of the importance of distance leads one to view in a fresh light the problems of administration' (Braudel 1975: 371). The minimum direct travel time from Uruk to Habuba along the shorter Jazirah route would have been at least a month, more likely two (Grant 1937: 171 (figures for faster camel caravans)), and it is another 400km to sites like Değirmentepe, a destination, moreover, that requires crossing the Taurus. One of the extraordinary features of the phenomena we have been examining is the consistency of artefactual materials from the 'colony' sites and their southern homeland. Such statements obviously demand further quantitative examination, but much of the relevant data is only recently excavated. Even the degree to which the northern ^cUbaid and Uruk pottery is imported or locally manufactured remains to be ascertained (ICPES analyses are being carried out at present on southern Uruk types from Brak), but it is clear in some instances that the Late Uruk fabric is identical at Uruk, Brak and Habuba (for example in the very recognizable 'soft' brown clay of the red-slipped nose-lug jugs (Strommenger 1980: pl. D)). Despite the distances involved, the degree to which identical materials are found at these sites, whether locally made or imported, and over the now more lengthy period of time represented by Shaikh Hassan, Habuba and Jamdat Nasr Brak, suggests that direct and regular contact was maintained with the south. How early the donkey caravan came to play a role is uncertain, but may be suggested indirectly by the use of the steppe route at Middle Uruk Kowm-Caracol (see also Zarins 1978).

Whether the southern terminus was represented by Uruk alone, a degree of centralization for which the evidence is largely negative, or by competing polities on the Early Dynastic model, or by some version of Jacobsen's 'Kengir League' (1957: 99–109) remains to be established, though the latter receives some support in the evidence of the Jamdat Nasr 'city sealings' (Matthews, in press). It has been argued that the assumed Late Uruk loss of Anatolian raw material sources may be reflected in the restructuring visible at Jamdat Nasr Warka (Eanna archaic III), but the new evidence from Brak indicates an active though more probably restricted Jamdat Nasr presence in the north, associated with significant restructuring within the distant Anatolian metal-producing areas. The fact that long distance exchange relations with this area can now be shown to begin as early as the ^eUbaid period, and to continue throughout most of the fourth millennium, must add strong support to the view that asymmetrical cross-cultural trade was one important factor in the growth of the Sumerian state.

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Faculty of Oriental Studies University of Cambridge

References

Adams, Robert McC. 1974. Anthropological perspectives on ancient trade. *Current Anthropology*, 15: 239–49.

Adams, Robert McC. 1981. Heartland of Cities. Chicago: University Press.

Admiralty Handbook 1918. Geology of Mesopotamia and its Borderlands. Admiralty Naval Staff. London.

Admiralty Handbook 1944. *Iraq and the Persian Gulf*. Admiralty Intelligence Division, Geographical Handbook, London: HMSO.

Alden, J. R. 1982. Trade and politics in Proto-Elamite Iran. Current Anthropology, 23: 613–28.

Algaze, G. 1986. Kurban Höyük and the Chalcolithic period in the northwest Mesopotamian periphery. In Finkbeiner and Röllig (eds) 1986: 274–311.

Algaze, G. 1989. The Uruk expansion. *Current Anthropology*, 30: 571–91.

Amiet, Pierre 1986. L'âge des échanges inter-iraniens 3500-1700 avant J.-C. Paris: Editions de la Réunion des musées nationaux.

Behm-Blancke, M. R. 1985. Die Ausgrabungen auf dem Hassek Höyük im Jahre 1984. VII. Kazı Sonuçları Toplantısı. Ankara.

Behm-Blancke, M. R. 1989. Mosaikstifte am oberen Euphrat – Wandschmuck aus der Uruk-Zeit. *Istanbuler Mitteilungen*, 39: 73–83.

Behm-Blancke, M. R. et al. 1981. Hassek Höyük. Vorläufiger Bericht über die Ausgrabungen der Jahre 1978–1980. *Istanbuler Mitteilungen*, 31: 5–82.

Behm-Blancke, M. R. et al. 1984. Hassek Höyük. Vorläufiger Bericht über die Ausgrabungen in den Jahren 1981–1983. *Istanbuler Mitteilungen*, 34: 31–149.

Boehmer, R. M. 1984. Kalkstein für das urukzeitliche Uruk. Baghdader Mitteilungen, 15: 141–7.

Boehmer, R. M. 1991. ¹⁴C-Daten aus Uruk und Abydos – Ägyptisches (?) im Frühen Nordsyrien, Sumer und Elam. *Baghdader Mitteilungen*, 22: 223–30.

Boese, J. 1986–7. Excavation at Tell Sheikh Hassan, preliminary report on the 1987 campaign in the Euphrates Valley. *Annales Archéologiques Arabes Syriennes*, 36/37: 67–101.

Boese, J. 1987–8. Excavations at Tell Sheikh Hassan. Preliminary report of the 1988 campaign in the Euphrates Valley. *Les Annales Archéologiques Arabes Syriennes*, 37/8: 158–89.

Boese, J. 1989–90. Tall Sheikh Hassan, 1984–86. Archiv für Orientforschung, 36/37: 323–31.

Brandes, M. A. 1979. Siegelabrollungen aus den Archaischen Bauschichten in Uruk-Warka. Freiburger Altorientalische Studien 3.

Braudel, Fernand 1975. The Mediterranean and the Mediterranean World of Philip II, second revised edition. London: Fontana/Collins.

Brumfiel, E. M. and Earle, T. K. (eds) 1987. Specialization, Exchange and Complex Societies. Cambridge: Cambridge University Press.

Cauvin, J. and Stordeur, D. 1985. Une occupation d'époque Uruk en Palmyrène: le niveau

supérieur d'El Kowm-Caracol. In Cahiers de l'Euphrate 4 (eds J. Cauvin and O. Aurenche). Paris: Editions du CNRS, pp. 191–205.

Chazan, M. and Lehner, M. 1990. An ancient analogy: pot baked bread in Ancient Egypt and Mesopotamia. Paléorient, 16: 21-35.

Crawford, H. E. W. 1973. Mesopotamia's invisible exports in the third millennium BC. World Archaeology, 5: 232-41.

Curtin, P. D. 1984. Cross Cultural Trade in World History. Cambridge: Cambridge University Press.

Davidson, T. E. and McKerrell, H. 1980. The neutron activation analysis of Halaf and cubaid pottery from Tell Arpachiyah and Tepe Gawra. Iraq, 42: 155-67.

Emre, K., Hrouda, B., Mellink, M. and Özgüç, N. (eds) 1989. Anatolia and the Ancient Near East. Studies in Honor of Tahsin Özgüç. Ankara.

Esin, Ufuk 1982a. Tepecik excavations, 1974. Keban Project 1974-75 Activities, 17: 95-118. Ankara.

Esin, Ufuk 1982b. Siedlungsordnung im östlichen Anatolien während des 4. und 3. Jahrtausends v. Chr. In *Palast und Hütte*. Mainz: Philipp von Zabern, pp. 73–86.

Esin, Ufuk 1983. Zur Datierung der vorgeschichtlichen Schichten von Değirmentepe bei Malatya in der öslichen Türkei. In Beiträge zur Altertumskunde Kleinasiens (eds R. M. Boehmer and H. Hauptmann). Mainz: Philipp von Zabern, pp. 175-90.

Esin, Ufuk 1985. Some small finds from the Chalcolithic occupation at Değirmentepe (Malatya) in Eastern Turkey. In Studi di Paletnologia in Onore de Salvatore M. Puglisi. Università de Roma, pp. 253-63.

Esin, Ufuk 1986. Değirmentepe Excavations. In IX Kazı Sonuçları Toplantısı, I: 79–125. Ankara, 1987.

Esin, Ufuk 1989. An Early Trading Center in Eastern Anatolia. In Emre et al. (eds) 1989: 135-41.

Fales, F. M., Tusa, S., Wilhelm, G. and Zaccagnini, C. 1987. Preliminary report on the first campaign of excavations within the Saddam Archaeological Rescue Project (1984). Researches on the Antiquities of Saddam Dam Basin Salvage. Baghdad, pp. 99–128.

Finkbeiner, U. 1986. Uruk-Warka: evidence of the Gamdat Nasr period. In Finkbeiner and Röllig (eds) 1986: 33-55.

Finkbeiner, U. and Röllig, W. (eds) 1986. *Gamdat Nasr. Period or Regional Style?* Wiesbaden: Dr. Ludwig Reichert.

Flannery, K. V. 1967. The Olmec and the Valley of Oaxaca: a model for inter-regional interaction in Formative times. Reprinted in The Rise and Fall of Civilizations (eds C. C. Lamberg-Karlovsky and J. A. Sabloff) 1974: 64-83.

Forest, Jean-Daniel 1983. Les pratiques funéraire en Mésopotamie du cinquième millénaire au début du troisième: Etude de cas. Paris: Editions Recherche sur les Civilizations.

Frangipane, M. and Palmieri, A. 1988. Perspectives on Protourbanization in Eastern Anatolia: Arslantepe (Malatya). An interim report on 1975-1983 campaigns. Rome. (Origini, XII, 1983: 287-668).

Frifelt, K. 1989. Cubaid in the Gulf Area. In Henrickson and Thuesen (eds) 1989: 405–15.

Gelb, I. J. 1986. Ebla and Lagash: environmental contrast. In The Origins of Cities in Dry-Farming Syria and Mesopotamia in the Third Millennium BC (ed. H. Weiss). Guilford: Four Quarters Publishing, pp. 157–67.

Grant, C. P. 1937. The Syrian Desert. London: A. C. Black.

Hammadeh, H. and Koike, Y. n.d. Excavations of the National Archaeological Expedition in the Tishrin Dam Basin, 1990.

Hauptmann, H. 1974. Die Grabungen auf dem Norsun-Tepe, 1971. Türk Kurumu Basımevi. (Keban Project 1971 Activities I4). Ankara, pp. 71–84.

Hauptmann, H. 1976. Die Grabungen auf dem Norsun-Tepe, 1972. Türk Tarih Kurumu Basımevi. (Keban Project 1972 Activities I5). Ankara, pp. 41–66.

Hauptmann, H. 1982. Die Grabungen auf dem Norsuntepe, 1974. Keban Project Activities, 17: 41–70.

Henrickson, E. F. and Thuesen, I. (eds) 1989. *Upon This Foundation – the ^eUbaid Reconsidered*. Copenhagen: Museum Tusculanum Press.

Jacobsen, T. 1957. Early political development in Mesopotamia. *Zeitschrift für Assyriologie*, n.f. 18: 91–140.

Larsen, M. T. 1987. Commercial networks in the Ancient Near East. In *Centre and Periphery in the Ancient World* (eds M. Rowlands, M. Larsen and K. Kristiansen). Cambridge: Cambridge University Press, pp. 47–56.

Lebeau, M. 1990. Esquisse d'une histoire de la Haute Mésopotamie au début de l'Age du Bronze. Zeitschrift für Assyriologie, 80: 242–96.

Lloyd, S. and Safar, F. 1948. Eridu. Sumer, 4: 115–27.

Mallowan, M. E. L. M. 1947. Excavations at Brak and Chagar Bazar. Iraq, 9.

Mallowan, M. E. L. M. and Rose, J. C. 1935. The excavations at Tell Arpachiyah, Iraq, 2.

Matthews, R. J. 1989. Excavations at Jemdet Nasr, 1988. Iraq, 51: 225–48.

Matthews, R. J. 1992. Defining the style of the period: Jemdet Nasr 1926–8. *Iraq*, 54: 1–34.

Matthews, R. J. in press. *Cities, Seals and Writing: Archaic Seal Impressions from Jemdet Nasr and Ur.* Materialien zu den Frühen Schriftzeugnissen des Vorderen Orients 2.

Millard, A. 1988. The bevelled-rim bowls: their purpose and significance. *Iraq*, 50: 49–57.

Moorey, P. R. S. 1985. *Materials and Manufacture in Ancient Mesopotamia*. Oxford: British Archaeological Reports International Series 237.

Moorey, P. R. S. 1987. On tracking cultural transfers in prehistory: the case of Egypt and lower Mesopotamia in the fourth millennium BC. In *Centre and Periphery in the Ancient World* (eds M. Rowlands, M. Larsen and K. Kristiansen). Cambridge: Cambridge University Press, pp. 36–46.

Moorey, P. R. S. 1990. From Gulf to Delta in the fourth millennium BCE: the Syrian connection. *Eretz-Israel*, 21: 62–69. Jerusalem: Israel Exploration Society.

Nissen, H. J. 1970. Grabung in den Quadraten K/L XII in Uruk-Warka. *Baghdader Mitteilungen*, 5: 101–91.

Nissen, H. J. 1974. Zur Frage der Arbeitsorganisation in Babylonien während der Späturuk-Zeit. *Acta Antiqua Academiae Scientarium Hungaricae*, 22: 5–14.

Nissen, H. J. 1986. The development of writing and of glyptic art. In Finkbeiner and Röllig (eds) 1986: 316–29.

Oates, D. 1977. The excavations at Tell Brak, 1976. Iraq, 39: 233-44.

Oates, D. 1968. Studies in the Ancient History of Northern Iraq. British Academy: Oxford University Press.

Oates, D. and Oates, J. 1976. Early irrigation agriculture in Mesopotamia. In *Problems in Economic and Social Archaeology* (eds G. deG. Sieveking, I. Longworth and K. Wilson). London: Duckworth, pp. 109–35.

Oates, D. and Oates, J. 1989. Akkadian buildings at Tell Brak. *Iraq*, 51: 193–211.

Oates, D. and Oates, J. 1991. Excavations at Tell Brak 1990–91. *Iraq*, 53: 127–45.

Oates, J. 1976. Prehistory in northeastern Arabia. Antiquity, 50: 20-31.

Oates, J. 1977. Mesopotamian social organization: archaeological and philological evidence. In The Evolution of Social Systems (eds J. Friedman and M. Rowlands). London: Duckworth, pp. 457–85.

Oates, J. 1984. Ubaid Mesopotamia reconsidered. In The Hilly Flanks and Beyond. Essays on the Prehistory of Southwestern Asia presented to Robert J. Braidwood (eds P. Mortensen, P. E. L. Smith, T. Cuyler Young, Jr). University of Chicago Press, pp. 251–81.

Oates, J. 1986. Tell Brak: the Uruk/Early Dynastic Sequence. In Finkbeiner and Röllig (eds) 1986: 245–71.

Oates, J., Kamilli, D. and McKerrell, H. 1977. Seafaring merchants of Ur? Antiquity, 51: 221–34.

Palmieri, Alba 1981. Excavations at Arslantepe (Malatya). Anatolian Studies, 31: 101-19.

Palmieri, Alba 1985. Eastern Anatolia and early Mesopotamian urbanization: remarks on changing relations. In Studi di Paletnologia in onore di Salvatore M. Puglisi. Università di Roma 'La Sapienza', pp. 192–213.

Palmieri. Alba 1989. Storage and distribution at Arslantepe-Malatya in the Late Uruk Period. In Emre et al. 1989: 420-30.

Pollock, S. 1990. Political economy as viewed from the garbage dump: Jemdet Nasr occupation at the Uruk mound, Abu Salabikh. *Paléorient*, 16: 57–75.

Pollock, S., Steele, C. and Pope, M. 1991. Investigations on the Uruk Mound, Abu Salabikh, 1990. *Iraq*, 53: 59–74.

Postgate, J. N. 1986. The transition from Uruk to Early Dynastic: continuities and discontinuities in the record of settlement. In Finkbeiner and Röllig (eds) 1986: 90–106.

Potts, D. T. 1986. Eastern Arabia and the Oman Peninsula during the Late Fourth and Early Third Millennium B.C. In Finkbeiner and Röllig (eds) 1986: 121-68.

Renfrew, C. 1986. Varna and the emergence of wealth in prehistoric Europe. In *The Social Life of* Things (ed. A. Appadurai). Cambridge: Cambridge University Press, pp. 141-68.

Rothman, Mitchell S. 1988. Centralization, administration, and function at fourth millennium, B.C. Tepe Gawra, Northern Iraq. University of Pennsylvania Ph.D. dissertation. Ann Arbor: University Microfilms.

Schwartz, G. M. 1988. Excavation at Karatut Mevkii and perspectives on the Uruk/Jemdet Nasr expansion. Akkadica, 56: 1-41.

Strommenger, E. 1980. Habuba Kabira. Eine Stadt for 5000 Jahren. Mainz: von Zabern.

Sürenhagen, D. 1974/5. Untersuchungen zur Keramikproduktion innerhalb der Spät-Urukzeitlichen Siedlung Habuba Kabira-Süd. Acta praehist. et arch., 5/6.

Sürenhagen, D. 1986. The Dry-farming belt: the Uruk period and subsequent developments. In The Origins of Cities in Dry-Farming Syria and Mesopotamia in the Third Millennium B.C. (ed. H. Weiss). Guilford: Four Quarters Publishing Co., pp. 7–43.

Tobler, A. J. 1950. Excavations at Tepe Gawra II. Philadelphia: University Museum.

van Driel, G. 1979. Jebel Aruda 1977–78. Akkadica, 12: 2–28.

van Driel, G. 1983. Seals and sealings from Jebel Aruda 1974–1978. Akkadica, 33: 34–62.

van Loon, M. N. (ed.) 1978. Korucutepe 2. Amsterdam: North-Holland Publishing Company.

von der Way, T. 1987. Tell el Faracin-Buto 2. Bericht. Mitteilungen des Deutschen Archäologischen *Instituts abt. Kairo*, 43: 241–50.

von Wickede, A. 1990. Prähistorische Stempel Glyptik in Vorderasien. Munich: Profil Verlag.

Weiss, H. and Young, T. C. Jr 1975. The Merchants of Susa. Iran 13: 1–17.

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Woolley, C. L. 1931. Excavations at Ur, 1930-1. Antiquaries Journal, XI: 343-81.

Wright, H. T. 1981. An Early Town on the Deh Luran Plain. Excavations at Tepe Farukhabad. Memoirs of the Museum of Anthropology, University of Michigan 13.

Yoffee, N. 1981. Explaining Trade in Ancient Western Asia. Monographs on the Ancient Near East 2. Malibu: Undena.

Zarins, J. 1978. The domesticated Equidae of third-millennium-BC Mesopotamia. *Journal of Cuneiform Studies*, 30: 3–17.

Abstract

Oates, Joan

Trade and power in the fifth and fourth millennia BC: new evidence from northern Mesopotamia

The formation of the earliest known cities was accompanied by the foundation of colonies in Syria and Anatolia, established to secure raw materials lacking in the Mesopotamian homeland. The growth in Sumer of organization(s) capable of constructing and administering such distant colonies both reflected and contributed to increasing levels of social and economic complexity. The paper summarizes new evidence from Tell Brak and Tell Shaikh Hassan, which substantially lengthens the colony period. It also emphasizes the ^cUbaid roots of this pattern.